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Hour-glass Stomach Due to Cicatrization of Gastric Ulcer *al*

*Operation by Anastomosis between the Cardiac and
Pyloric Portions by a New Method*

RECOVERY, WITH RESTORATION OF HEALTH

BY

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HOUR-GLASS STOMACH DUE TO CICATRIZATION OF GASTRIC ULCER.¹

OPERATION BY ANASTOMOSIS BETWEEN THE CARDIAC AND PYLORIC PORTIONS BY A NEW METHOD: RECOVERY WITH RESTORATION OF HEALTH.

BY FRANCIS S. WATSON, M.D.,

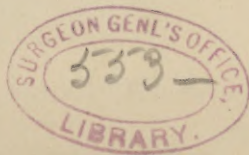
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SEVEN years ago, the patient, a woman aged thirty-two, had an attack of jaundice accompanied by pain in the epigastrium and vomiting of blood. She remained well for two years after recovering from this attack, when the following symptoms appeared: eructations of wind, nausea, and tenderness in the epigastrium, these being most marked immediately after taking food. The symptoms gradually increased in severity, and for the last three years she has been in almost constant pain. Vomiting began nine months ago, and has occurred almost daily ever since, with the exception of five weeks when the patient was fed by rectal enemata. Within the last year she has lost forty pounds in weight, and weighs now only eighty-seven. Menstruation has been absent for six months. She is very weak and can scarcely walk. There is no look of cachexia, but great pallor and emaciation, and she is in a very critical condition.

The abdominal wall is retracted and rigid. On the left side of the epigastrium there is an area of tenderness, and an ill-defined induration and swelling.

Operation, September 13, 1895. A V-shaped incision, as shown in Fig. 1, was made in the epigastrium,

¹ Read before the Surgical Section of the Suffolk District Medical Society, February 5, 1896.



and the stomach exposed. At a point one-third of the way from its duodenal end was a hard mass of cicatrix, circular in form, involving the larger part of the circumference of the organ and constricting it very narrowly. The constriction did not seem to be of a cancerous nature, but rather to be due to the cicatrization of former ulcers of the stomach (see Fig. 2).

The writer had expected to find cancerous disease of the stomach or duodenum. In the face of the conditions described above, gastro-enterostomy or a plastic operation by division of the stricture longitudinally, and suturing it transversely after the manner of the pyloroplastic operation, or resection of the cicatrix, were, so far as the author knew, the only operations that were applicable. It seemed to him that it would be better, however, to establish an anastomosis between the upper and lower parts of the stomach, instead of between the stomach and the intestine, and in this way to retain the useful function of the natural outlet of the stomach. The pyloro-plastic operation was not selected because of the great amount of cicatricial tissue present, and the difficulty of securing a sufficiently wide opening. Resection of the cicatrix, and union of the two portions of the stomach afterward seemed to involve greater danger than the operation which suggested itself to the writer—as mentioned above.

Anastomosis between the two ends of the stomach was accomplished in the following way: The pyloric portion and the first part of the duodenum were lifted upward and turned over upon the cardiac portion (the constricted part acting as a hinge), and united to it by a single row of fine silk sutures in the form of an ellipse, four inches in length, and one inch and a half in width. One suture was left long on either side of the ends of the ellipse, to indicate the space enclosed

by the line of sutures, and to serve as a guide for making the communicating incisions in the stomach (see Figs. 3 and 4). The sutured surfaces were somewhat nearer the greater than the lesser curvature of the stomach.

This complete joining of the two portions before making the communicating incisions between them was done in order to avoid spilling any of the stomach contents into the peritoneal cavity, and is, so far as the author can learn, an original method.

The operation was now continued as follows: The only way to gain access to the surfaces united within the sutured ellipse, was by making an incision through the upper part of the turned over pyloric portion (see Fig. 5 ff). Through this opening, a communicating incision, three inches in length, between the two portions of the stomach, united within the sutured ellipse, was made; this allowed examination of the stricture from within the stomach. The stricture was found to be dense and non-dilatable, and barely admitted the little finger. The edges of the communicating incisions were in part sewed over and over, so as to prevent their uniting (see Fig. 6). The patient's condition at this point being critical, the incision through the pyloric portion of the stomach, which had given access to its interior, was rapidly sutured, the stomach returned to the abdomen, and the abdominal wound completely closed.

SUBSEQUENT COURSE.

The patient rallied twelve hours after the operation. She vomited twice in the first twenty-four hours, but not afterward, and was free from all pain after the second day. She was kept on nutrient enemata for the first five days, then fed by the mouth very cautiously with liquids. On the tenth day she was given

solid food; on the twenty-first day she was eating heartily, and was out of bed.

At the end of the first day after taking food by the mouth, she said with conviction that she was sure there was a free exit from the stomach for all food taken into it, that the passage of food was painless, and felt natural.

The return of strength and gain in weight were rapid. On the 2d of November, she had gained eleven pounds. December 29th, three months and a half after the operation, there had been a further gain in weight of eleven pounds, making in all twenty-two pounds, and at the date of this publication (nearly seven months) she has added eight more, a total gain of thirty pounds. The patient's general condition is excellent, and she has resumed her work, that of a cook. It is now (April 7, 1896) nearly seven months since the operation, and the patient remains in excellent health and is hard at work.

At the time I operated, I was not aware that any operation like this had been done before, but subsequently found this was not the case. Wölfler performed a similar operation for the first time upon a female thirty-seven years old, on May 22, 1894. Four months later he reported the case.² At that time the patient was in excellent condition, had gained steadily in weight, and appeared to be fully restored to health. Eiselsberg³ followed with a second case in September of the same year. My case, therefore, is the third so far as I can learn. "Eiselsberg's" patient was a woman twenty-eight years old, who had symptoms of pyloric stenosis with hematemesis; a hard tumor could be felt in the region of the stomach. On the 25th of October, 1894, laparotomy showed an

² Beiträge zur klin. Chir., xlii, I, 1894.

³ Arch. f. klin. Chir., 1895, Band 50, Heft 4.

hour-glass contraction of the stomach (the constriction being nearly in the middle of the organ), due to an ulcer of the stomach which had cicatrized upon the anterior wall, forming a hard cicatricial mass nearly encircling the entire circumference of the organ. The incision in the pyloric end in this case was unfortunately carried too close to the strictured portion, and indeed extended somewhat into it, which resulted in a tearing out of the sutures on the second day, from which there resulted a fatal peritonitis."

The writer would call special attention to his method of making the anastomosis in this case. It has the advantage of making it easier to prevent the pouring out of stomach or, if performed upon the bowel, of the intestinal contents into the peritoneal cavity. The long sutures left at each corner of the ellipse, when drawn upon, define its form and limits to the touch, so that the communicating incisions can be safely made.

The opportunity to do this operation must necessarily be rare, because of the relative infrequency of the condition for the relief of which it is applicable, and because in a certain number of cases its performance will be embarrassed by the presence of adhesions which will so restrict the mobility of the stomach as to make it impossible to turn one part over upon the other; when, however, it is practicable to do this, the operation seems to the writer to possess decided advantages as compared with others in vogue.

The illustrations — intended to be diagrammatic only — are from photographs of a model of a stomach, and represent the different stages of the operation, with the exception of Fig. 6, in which the stomach is returned to its original position in order to show the form of the sutured areas uniting the two portions of the stomach, and the communicating incisions between them.

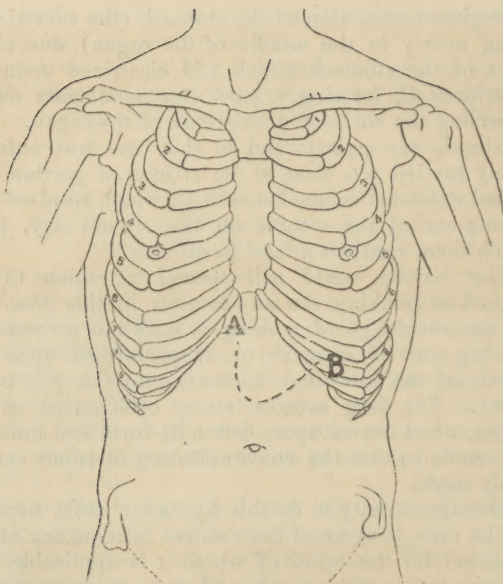


FIG. 1.
A B, Line of incision.

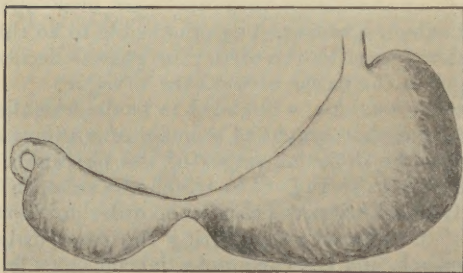


FIG. 2
Shows the position of the stricture.

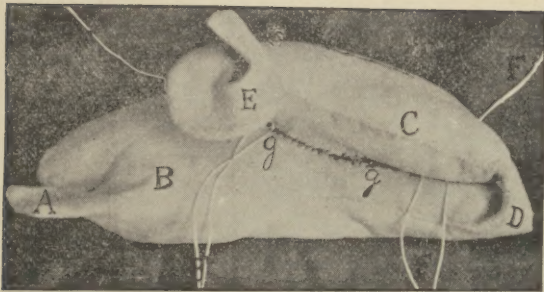


FIG. 3.

A, Esophagus. B, Cardiac end of stomach. C, Pyloric end of stomach. D, Stricture. E, Duodenum. FFFF, Sutures left long to indicate the line of sutures joining the two parts of the stomach. gg, A part of the suture joining the two parts of stomach. Fig. 4 shows the other side of the two united parts of the stomach.

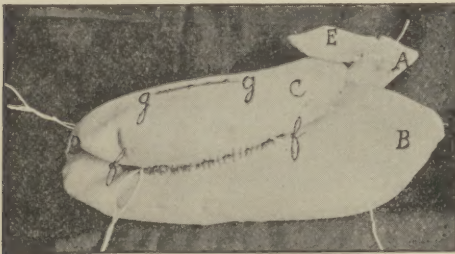


FIG. 4.

This shows the pyloric end laid upon the cardiac end of the stomach, and united by the ellipse of sutures, one side of which is shown (f. f.). gg. is the incision through which the interior of the pyloric part of the stomach was entered after the two parts of the stomach were wholly united—in order to make the communicating incisions.

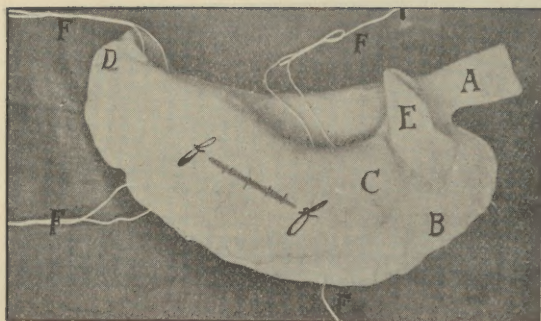


FIG. 5

This shows the incision through the upper surface of the pyloric portion of the stomach (f f) and the four long sutures (F F F F) which served as guides to indicate the line of the uniting sutures.

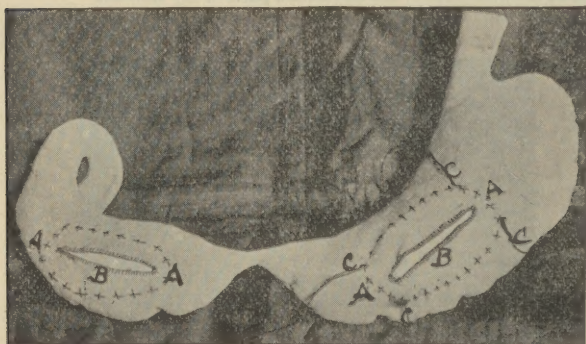


FIG. 6.

The stomach is here represented as being turned back to its original position in order to show the form (A A A A) of the sutured areas which united the two parts of the stomach. The communicating incisions (B B) and the position of the four long sutures (C C C C) which served as guides to indicate the limits of the sutured areas.

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